# Tuna Newsletter

National Marine Fisheries Service

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National Marine Fisheries Service
2570 Dole Street
Honolulu, Hawaii

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*Wes Parks,* Editor


## THE U.S. CANNED-TUNA INDUSTRY IN 1988


*Wes Parks,* SWFC
*Pat Donley,* SWR
*Sam Herrick*, SWFC


**Highlights:** The number of active U.S. purse-seiners declined slightly in 1988, continuing the trend begun in 1984. In 1988, 74 U.S. purse-seiners made at least one trip. Total capacity was up slightly. An average of 60 U.S. purse-seiners per month were active. Fifty-seven percent of U.S. purse-seiners active in 1988 operated in the eastern Pacific; 43% operated in the western Pacific. Total receipts of raw tuna by U.S. canneries declined slightly in 1988, reversing a 2-year trend of modest increases since a low in 1985. Total receipts were 510,471 short ton (st). Monthly receipts averaged 42,500 st. Skipjack was the principal component of both domestically caught deliveries and imports. Imports contributed slightly more than domestic deliveries to total 1988 cannery receipts. Major non-U.S. suppliers were Taiwan, South Korea, and Ghana. The western Pacific was the main source of albacore and skipjack in U.S. cannery receipts, while the eastern Pacific contributed the greatest quantity of yellowfin. Contract prices for domestically caught raw tuna delivered to U.S. canneries in American Samoa and Puerto Rico in early 1988 were slightly higher than in late 1987, then declined later in the year to levels below those of 1987. Weighted-average ex-vessel prices paid by canners for domestically caught tuna increased for the third straight year and were at their highest levels since 1982. U.S. production of canned tuna declined slightly in 1988, reversing the recent upward trend. U.S. canners packed 31 million standard cases of tuna worth over $960 million. U.S. imports of canned tuna reached a record high in 1988 continuing the upward trend of recent years. Total imports were 12.5 million standard cases, valued over $298 million. Wholesale list prices in California for canned tuna in early 1988 remained at levels of late 1987, then fluctuated for the remainder of the year.

**During the fourth quarter of 1988, 66 purse-seiners in the U.S. tropical tuna purse-seine fleet made at least one trip,** two fewer than the number of vessels active in fourth quarter 1987 (Table 1). Total capacity was down marginally. As in 1987, vessels active in fourth quarter 1988 concentrated their operations in the eastern and western Pacific Ocean; there was no effort by U.S. vessels in the Atlantic or Indian Oceans in the fourth quarter.

**The number of active U.S. purse-seiners declined slightly in 1988** continuing the trend begun in 1984 (Fig. 1). In 1988, 74 U.S. purse-seiners made at least one trip, down 1% from 1987 and down 19% from the recent (1984-87) longer-term average (Table 2). Total capacity of U.S. purse-seiners active in 1988 was 81,870 st, up 2% from 1987 and down 17% from the recent average.

An average of 60 U.S. purse-seiners per month were active in 1988, 3 fewer than the average number active during months of 1987

and 8 fewer than the average number for the period 1984-1987 (Fig. 2). Monthly activity was relatively constant in 1988, except in December when the number of vessels active decreased to 43.

Fifty-seven percent of U.S. purse-seiners active in 1988 operated in the eastern Pacific; 43% operated in the western Pacific (Fig. 3). This distribution is essentially the same as in 1987. Over the longer term, the distribution between eastern and western Pacific has been more nearly even.

**During the fourth quarter of 1988, 131,244 st of frozen, raw tuna were delivered to U.S. canneries.** Fourth-quarter receipts were up 4% from receipts in the fourth quarter of 1987 (Table 3).

Skipjack tuna was the principal species in fourth-quarter U.S. cannery receipts in 1988, contributing 50% of the total, followed by yellowfin at 30%. This is the reverse of the situation in 1987 when yellowfin was the principal species in receipts.

**Total receipts of frozen, raw tuna by U.S. canneries declined slightly in 1988**, reversing a period of modest increases since a low in 1985 (Fig. 4). Total receipts were 510,471 st, down 4% from total 1987 receipts but down less than 1% from the recent average (Table 4). Both domestic deliveries and imports were down 4% from 1987.

Monthly receipts of raw tuna to U.S. canneries averaged 42,500 st during 1988 with little variation (Fig. 5).

**Table 1.** Number of active U.S. purse-seine vessels and capacity (short tons (st)) in the fourth quarters of 1988 and 1987.

| AREA | 1988 | 1987 |
|---|---|---|
| | No. vessels | |
| WATL | 0 | 0 |
| EP | 37 | 38 |
| WP | 29 | 30 |
| Total | 66 | 68 |
| | Capacity | |
| WATL | 0 | 0 |
| EP | 35,925 | 36,107 |
| WP | 36,950 | 37,075 |
| Total | 72,875 | 73,182 |

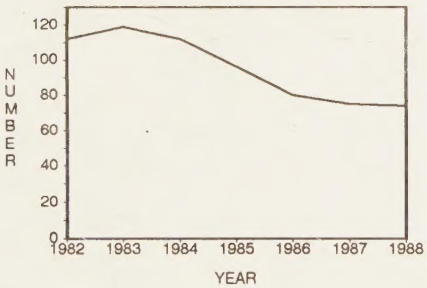


**Fig. 1.** Number of U.S. purse-seiners making at least one trip during the year, 1982-1988.

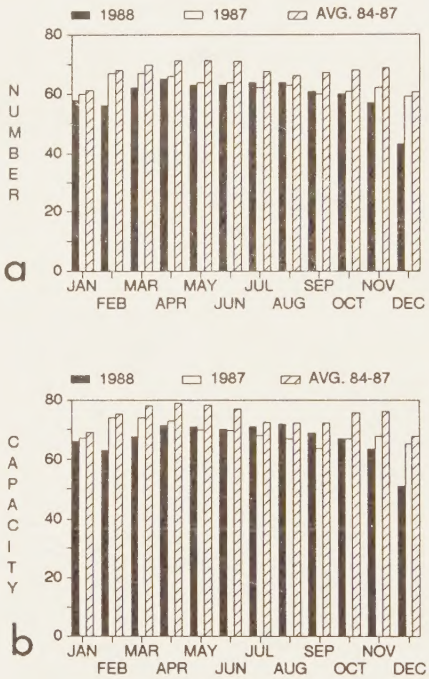


**Fig. 2.** (a.) Number of active U.S. purse-seine vessels by month in 1988, 1987 and the recent (1984-1987) average. (b.) Capacity (short tons (st)) of active U.S. vessels by month.

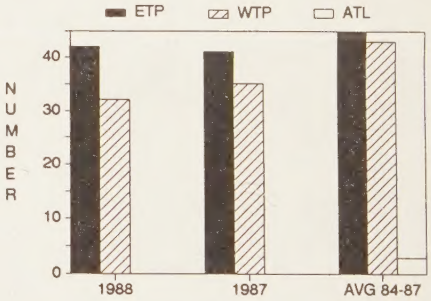


**Fig. 3.** Number of active U.S. purse-seine vessels by ocean area in 1988, 1987 and the recent (1984-1987) average.

**Table 2.** Number of active U.S. purse-seine vessels and capacity (st) in 1988, 1987 and the recent (1984-1987) average.

| PERIOD | WATL[1] | ETP | WTP | TOTAL |
|---|---|---|---|---|
| | No. Vessels | | | |
| 1988 | 0 | 42 | 32 | 74 |
| 1987 | 0 | 40 | 35 | 75 |
| Avg. 84-87 | 3 | 45 | 43 | 91 |
| | Capacity | | | |
| 1988 | 0 | 41,095 | 40,775 | 81,870 |
| 1987 | 0 | 37,302 | 43,225 | 80,527 |
| Avg. 84-87 | 3,085 | 42,997 | 52,651 | 98,734 |

[1]WATL = western Atlantic, ETP = eastern tropical Pacific, WTP = western tropical Pacific.

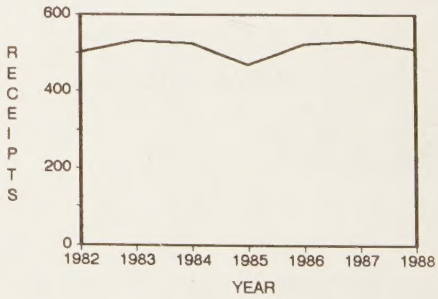


**Fig.4.** U.S. cannery receipts (1000 st) of raw tuna, 1982-1988.

Table 3. U.S. cannery receipts (in st) of domestic and imported raw tuna by species for fourth quarters of 1988 and 1987.

| YEAR | SOURCE | ALB | SKJ | YFN[1] | TOTAL |
|---|---|---|---|---|---|
| 1988 | Domestic | 1,172 | 37,328 | 27,017 | 65,517 |
| | Imported | 25,354 | 27,820 | 12,553 | 65,727 |
| | Total | 26,526 | 65,148 | 39,570 | 131,244 |
| 1987 | Domestic | 1,387 | 18,688 | 38,362 | 58,437 |
| | Imported | 27,905 | 23,688 | 15,867 | 67,460 |
| | Total | 29,292 | 42,376 | 54,229 | 125,897 |

[1] Includes a small amount of bigeye, bluefin and blackfin tuna.

Table 4. U.S. cannery receipts (st) of domestic and imported raw tuna by species for 1988, 1987 and the (1984-1987) average.

| YEAR | SOURCE | ALB | SKJ | YFN[1] | TOTAL |
|---|---|---|---|---|---|
| 1988 | Domestic | 7,660 | 126,458 | 109,202 | 243,320 |
| | Imported | 98,732 | 115,894 | 52,525 | 267,151 |
| | Total | 106,392 | 242,352 | 161,727 | 510,471 |
| 1987 | Domestic | 2,836 | 87,315 | 163,785 | 253.936 |
| | Imported | 101,361 | 95,057 | 82,349 | 278,767 |
| | Total | 104,197 | 182,372 | 246,134 | 532,703 |
| Avg. 84-87 | Domestic | 6,776 | 101,883 | 128,721 | 237,380 |
| | Imported | 100,412 | 106,899 | 67,726 | 274,955 |
| | Total | 107,188 | 208,782 | 196,365 | 512,335 |

[1] Includes a small amount of bigeye, bluefin and blackfin tuna.

**Skipjack was the principal species in cannery receipts in 1988** at 47% of the total (Fig. 6A). Yellowfin was the next largest contributor at 32%. The dominance of skipjack in 1988 was the reverse of the situation in 1987 when yellowfin was the greatest contributor to receipts. Over the longer term (1984-87), average annual skipjack receipts exceeded average yellowfin receipts. Skipjack was also the largest component of domestically caught deliveries in 1988 at 45% of the total (Fig. 6B). Yellowfin was the largest segment of domestic deliveries both in 1987 and over the longer term (1984-87).

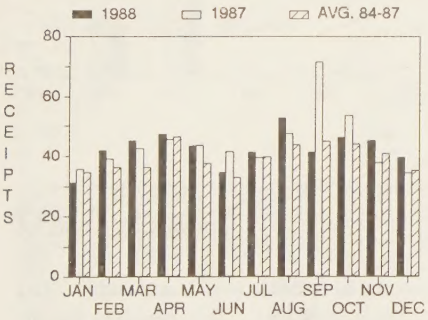


Fig. 5. Receipts (1000 st) of raw tuna to U.S. canneries by month in 1988, 1987 and the recent (1984-1987) average.

Skipjack comprised 43% of total receipts of raw tuna imported by U.S. canneries in 1988 while albacore and yellowfin made-up 21% and 19% (Fig. 6C). Skipjack imports also exceeded yellowfin imports in 1987 and over the longer term.

**Imports contributed slightly more than domestic deliveries** to total cannery receipts in 1988, continuing the pattern of recent years (Fig. 7). Principal non-U.S. suppliers during 1988 were Taiwan, South Korea, and Ghana (Table 5).

**The western Pacific Ocean was the principal fishing area for tuna delivered to U.S. canneries in 1988,** contributing 42% of total receipts (Fig. 8a). The 1988 pattern closely repeats both the 1987 and the longer-term (1984-1987) average patterns.

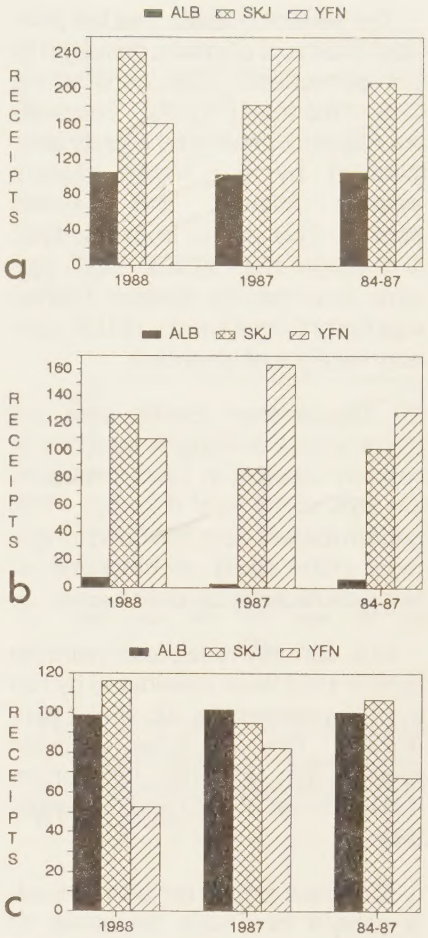


Fig. 6. Receipts (1000 st) of raw tuna by U.S. canneries in 1988 by species group: (a) total receipts (b) receipts from domestic vessels, and (c) receipts of imported tuna.

Fig. 7. Receipts (1000 st) of raw tuna by U.S. canneries by source in 1988, 1987 and the recent (1984-1987) average.

The western Pacific was the principal source of albacore delivered to U.S. canneries in 1988, contributing 42% of the total (Fig. 8b). The eastern Atlantic contributed slightly less, followed by the Indian Ocean, western Atlantic, and eastern Pacific. This differs from the 1987 and longer-term (1984-1987) patterns in which the eastern Atlantic was the principal source of U.S. cannery receipts of albacore.

The western Pacific was the major source of skipjack tuna in U.S. cannery receipts in 1988, contributing 56% of the total (Fig. 8c). This pattern follows both 1987 and longer term (1984-1987) distributions of skipjack receipts by ocean area.

U.S. cannery receipts of yellowfin tuna in 1988 were dominated by fish from the eastern Pacific which contributed 70% of total yellowfin receipts (Fig. 8d). The 1988 pattern repeats those of 1987 and the longer term.

**Contract prices for domestically-caught raw tuna delivered to U.S. canneries in American Samoa and Puerto Rico in early 1988 were slightly higher than in late 1987** (Tables 6, 7). Prices had increased dramatically (as much as 44% for 20 lbs. and larger yellowfin) from the first to the third quarter of 1987 (Tuna Newsletter Issue 89). By third quarter 1988, contract prices had fallen below those in effect during the third and fourth quarters of 1987, levels that remained for the balance of the year. Typically, actual prices paid to U.S. domestic contract vessels were adjusted depending on temperature, salt content and physical condition of the fish at the time of unloading. Prices paid to non-contract domestic and foreign vessels varied according to market conditions.

**Weighted-average ex-vessel prices paid by canners for domestically caught tuna increased in 1988** for the third straight year to their highest level since 1982 (Table 8). The average price for albacore rose 12% over the 1987 price and 36% over the recent average. The skipjack price was 36% higher than in 1987 and 44% higher than the recent year average, while the yellowfin price increased 23% over 1987 and 27% over the recent year average prices.

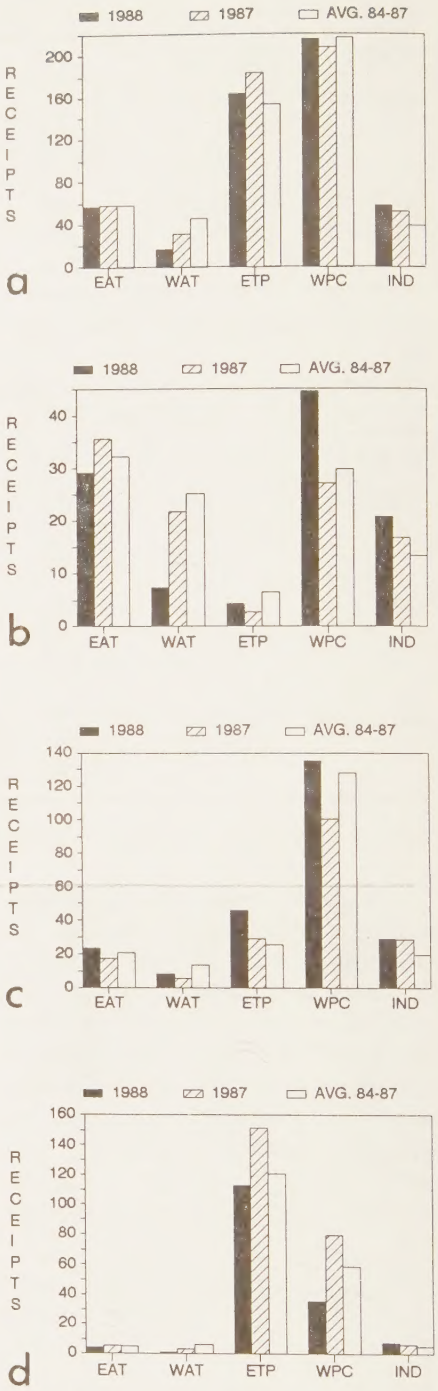


**Fig. 8.** Receipts (1000 st) of raw tuna by U.S. canneries by areas of capture in 1988, 1987 and the recent (1984-1987) average. (a) total receipts. (b) receipts of albacore. (c) receipts of skipjack. (d) receipts of yellowfin (includes small amounts of bigeye, blackfin and bluefin).

**Table 5.** U.S. cannery imports of raw tuna (st) by species and country for 1988. Also listed are total imports for all species for 1988 and 1987.

| | SPECIES | | | TOTAL | |
|---|---|---|---|---|---|
| COUNTRY | ALB | SJ | YF[1] | 1988[2] | 1987[3] |
| Taiwan | 70,143 | 3,406 | 2,833 | 76,382 | 17,762 |
| S. Korea | 12,367 | 21,572 | 8,159 | 42,098 | 34,862 |
| Ghana | 0 | 22,448 | 4,023 | 26,471 | 23,387 |
| France | 224 | 18,305 | 4,534 | 23,063 | 1,463 |
| Japan | 11,323 | 10,474 | 504 | 22,301 | 1,188 |
| Spain | 146 | 11,615 | 2,978 | 14,739 | 5,808 |
| Vanuatu | 0 | 6,801 | 6,974 | 13,775 | 12,399 |
| Venezuela | 23 | 2,358 | 7,972 | 10,353 | 18,681 |
| Mexico | 0 | 3,729 | 4,298 | 8,027 | 19,405 |
| Ecuador | 0 | 1,290 | 6,205 | 7,495 | 12,108 |
| Other | 4,506 | 13,896 | 4,045 | 22,447 | 131,704 |
| Total | 98,732 | 115,894 | 52,525 | 267,151 | 278,767 |

[1] Includes a small amount of bluefin, bigeye and blackfin tuna.
[2] Country is flag country of catcher vessel.
[3] Country is either flag country of vessel or country exporting to the U.S.

**U.S. production of canned tuna declined slightly in 1988** reversing the recent upward trend (Fig. 9). In 1988, U.S. canners packed 31 million standard cases of tuna worth over $960 million, (Table 9). Production of white meat tuna was down 6% from 1987 although its value was up 1%. Light meat production and the value of the pack were both down by 9% from 1987.

**U.S. imports of canned tuna reached a record high in 1988** continuing the recent upward trend (Fig. 10). Total imports were 12.5 million standard cases, up 16% from 1987 and up 18% from recent average imports (Table 10). The value of canned tuna imports also reached a record high in 1988, over $298 million, up 45% from 1987 and up 47% from the 1984-1987 average.

**Table 6.** Contract prices (U.S.$ per st) for raw skipjack and yellowfin tuna for delivery to U.S. canneries in American Samoa by U.S. vessels departing on trips in first, third and fourth quarters of 1988 and 1987.

| | SKIPJACK | | YELLOWFIN | |
|---|---|---|---|---|
| **SIZE CLASS (lbs)** | **1988** | **1987** | **1988** | **1987** |
| First quarter | | | | |
| 20 + | - | - | 1200 | 765 |
| 7.5 to 20 | 1050 | 685 | 1060 | 685 |
| 4 to 7.5 | 1000 | 615 | 1010 | 615 |
| 3 to 4 | 800 | 485 | 800 | 485 |
| 3 - | 525 | 285 | 525 | 285 |
| Third and fourth quarter | | | | |
| 20 + | - | - | 1065 | 1080 |
| 7.5 to 20 | 875 | 972 | 920 | 982 |
| 4 to 7.5 | 815 | 917 | 815 | 917 |
| 3 to 4 | 615 | 725 | 615 | 725 |
| 3 - | 340 | 450 | 340 | 450 |

**Table 7.** Contract prices (U.S.$ per st) for raw skipjack and yellowfin tuna for delivery to U.S. canneries in Puerto Rico by U.S. vessels departing on trips in first, third and fourth quarters of 1988 and 1987.

| | SKIPJACK | | YELLOWFIN | |
|---|---|---|---|---|
| **SIZE CLASS (lbs)** | **1988** | **1987** | **1988** | **1987** |
| First quarter | | | | |
| 20 + | - | - | 1200 | 765 |
| 7.5 to 20 | 1075 | 685 | 1075 | 685 |
| 4 to 7.5 | 1010 | 615 | 1010 | 615 |
| 3 to 4 | 800 | 485 | 800 | 485 |
| 3 - | 525 | 285 | 525 | 285 |
| Third and fourth quarter | | | | |
| 20 + | - | - | 1065 | 1125 |
| 7.5 to 20 | 900 | 1000 | 935 | 1000 |
| 4 to 7.5 | 825 | 937 | 825 | 937 |
| 3 to 4 | 340 | 725 | 615 | 725 |
| 3 - | 300 | 450 | 340 | 450 |

**Table 8.** Weighted-average ex-vessel prices (U.S. $ per st) paid for raw tuna delivered to U.S. canneries by species in 1988, 1987 and the recent (1984-1987) average.

| YEAR | ALBACORE | SKIPJACK | YELLOWFIN |
|---|---|---|---|
| 1988 | 1680 | 977 | 1094 |
| 1987 | 1496 | 716 | 892 |
| AVG. 1984-87 | 1236 | 679 | 859 |

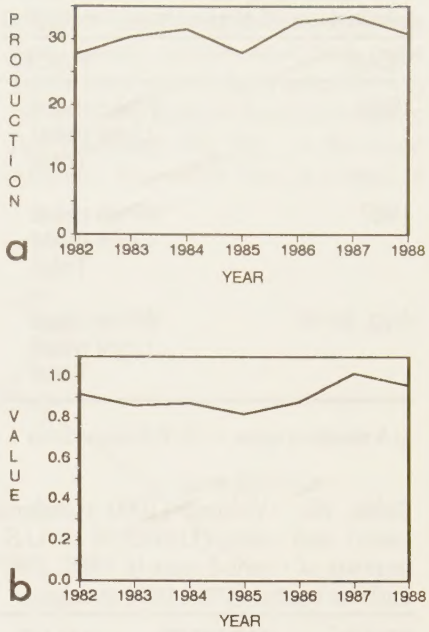


**Fig. 9.** U.S. production of canned tuna, 1982-1988, (a) volume (million standard cases) and (b) value ((US$million).

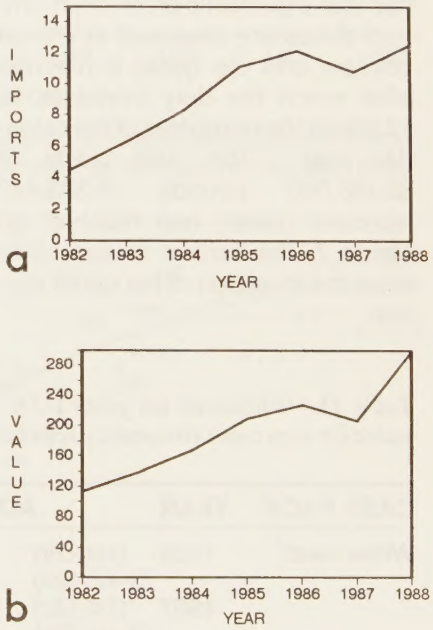


**Fig. 10.** U.S. imports of canned tuna, 1982-1988, (a) volume (million standard cases) and (b) value (US$million).

Table 9. Volume (1000 standard cases[1]) and value (US$1000) of U.S. cannery production of canned tuna for 1988, 1987 and the recent (1984-1987) averages.

| YEAR | PACK | PRODUCTION | VALUE |
|---|---|---|---|
| 1988 | White meat | 6,724 | 317,164 |
| | Light meat | 23,952 | 643,045 |
| | Total | 30,676 | 960,209 |
| 1987 | White meat | 7,174 | 313,611 |
| | Light meat | 26,364 | 704,048 |
| | Total | 33,538 | 1,017,659 |
| Avg. 84-87 | White meat | 7,255 | 290,073 |
| | Light meat | 24,156 | 607,983 |
| | Total | 31,411 | 898,056 |

1/ A standard case = 48, 6.5 ounce cans

Table 10. Volume (1000 standard cases) and value (US$1000) of U.S. imports of canned tuna in 1988, 1987 and the recent (1984-1987 averages.

| YEAR | IMPORTS | VALUE |
|---|---|---|
| 1988 | 12,539 | 298,666 |
| 1987 | 10,856 | 206,920 |
| Avg. 84-87 | 10,571 | 202,988 |

Canned tuna, in water, enters the United States under a quota system based on 20% of the previous calendar year's domestic production. Import duties are assessed at 6% ad valorem until the quota is reached after which the duty increases to 12.5% for the remainder of the calendar year. The 1988 quota of 85,185,000 pounds (4,368,462 standard cases) was reached on March 7, the earliest closure date since the inception of the quota system.

**Wholesale list prices in California for canned tuna in early 1988 remained at levels of late 1987** (Table 11). Wholesale prices had increased from the first quarter to the third quarter of 1987 (Tuna Newsletter Issue 89). These prices continued into 1988 then fluctuated for the remainder of the year.

Wholesale list prices for both advertised and private label packs of white meat and light meat canned tuna varied little over the period 1983-1987. Within years, there was also little variation until the increase in third-quarter 1987 referred to in the previous paragraph.

*Doug Prescott,* SWFC, *Mike Thabault*, SWR and especially *Diane Pickelsimer,* SWFC, contributed to this article.

Table 11. Wholesale list price (U.S. $ per st) in California for tuna canned in water for representative case packs for first and fourth quarters of 1988 and 1987.

| CASE PACK | YEAR | | ADVERTISED LABEL | PRIVATE LABEL |
|---|---|---|---|---|
| White meat[1] | 1988 | (1st Qtr) | 59.50 - 63.75 | 51.00 - 52.00 |
| | | (3-4th Qtr) | 64.50 - 67.15 | 52.00 - 54.00 |
| | 1987 | (1st Qtr) | 55.40 - 55.95 | 43.50 - 45.50 |
| | | (3-4th Qtr) | 59.50 - 63.57 | 51.00 - 51.50 |
| Light meat[2] | 1988 | (1st Qtr) | 42.45 - 45.00 | 30.00 - 32.50 |
| | | (3-4th Qtr) | 42.45 - 45.00 | 26.50 - 28.00 |
| | 1987 | (1st Qtr) | 34.20 - 43.45 | 23.00 - 26.50 |
| | | (3-4th Qtr) | 42.45 - 45.00 | 29.00 - 31.50 |

[1]White meat: solid 12.5 oz (24)
[2]Light meat: chunk 6.5 oz (48)

## ATLANTIC TUNA COMMISSION RECOMMENDS CONTINUING 1988 MANAGEMENT RECOMMENDATIONS

*Peter Miyake,* International Commission for the Conservation of Atlantic Tunas

**The International Commission for the Conservation of Atlantic Tunas (ICCAT) held its sixth Special Meeting** in Madrid, Spain, November 14-16, 1988. ICCAT considered possible regulatory measures for Atlantic tuna fisheries in 1989 and concluded its size limits for yellowfin, bigeye and bluefin tunas would remain unchanged. The Commission also recommended that for 1989, bluefin fishing regulations remain as recommended for 1988.

Delegates from 18 member countries attended the meeting, as well as observers from 11 non-member countries and 4 international organizations. The Commission's important activity at the Special Meeting was reviewing the condition of Atlantic stocks of all tunas and billfishes as reported to it by its research and statistics committee which met November 1-10.

**The Standing Committee on Research and Statistics (SCRS)** reviewed results of progress in tuna research as documented in 76 scientific papers. The SCRS report notes the following for major species.

**Yellowfin tuna - In the east Atlantic, fishing effort declined substantially in late 1983 and 1984** due to departure of French and Spanish purse seiners to the Indian Ocean (Fig. 1) Catch rates (CPUE's), particularly for large yellowfin, also declined suggesting either a reduction in the biomass or unusual low catchability (Fig. 2). There were some abnormalities in oceanographic conditions during this

period, suggesting a decline in catchability. CPUE has improved rapidly since 1984 and stabilized at a high level in 1985-87. The present catch is near the level of maximum sustainable yield (MSY) with less than optimal effort (Fig. 3). The shift of fishing effort to larger yellowfin reduced the proportion of undersized fish in terms of weight, but significant numbers are still taken.

For the western Atlantic, lack of adequate data prevented any serious stock analysis.

**Bigeye tuna - The catch of bigeye declined slightly in recent years** (Fig. 4). Bigeye tuna have been primarily exploited by longline. However, in recent years, a fairly large number of small bigeye have been also landed by the surface fishery in the Eastern tropical areas.

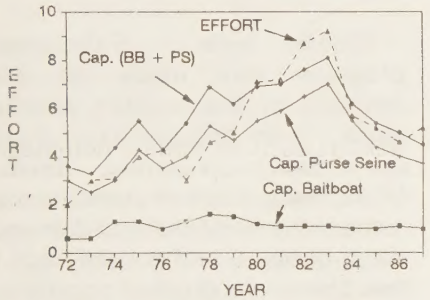


**Fig. 1.** Nominal effort (1000 mt carrying capacity) and effective effort (10,000 searching hours) for yellowfin in the eastern Atlantic, 1972-1987.

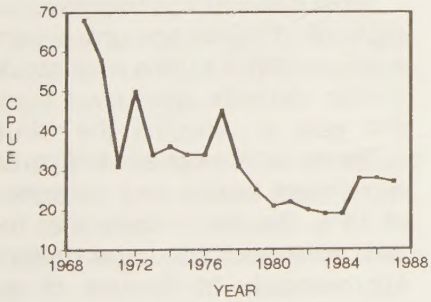


**Fig. 2.** Yellowfin catch-per-unit-effort (mt per fishing day) for FIS and Spanish purse seiners in the eastern Atlantic, 1969-1987.

The present level of catch is near the MSY with effort also less than optimum. An increase in yield would be possible by reducing effort on small fish and increasing effort on large fish.

**Skipjack - The previous conclusion that the east Atlantic stock has been under-exploited was confirmed,** particularly since fishing effort in the eastern tropical Atlantic has declined (Fig. 5). In the west Atlantic, the catch has declined in

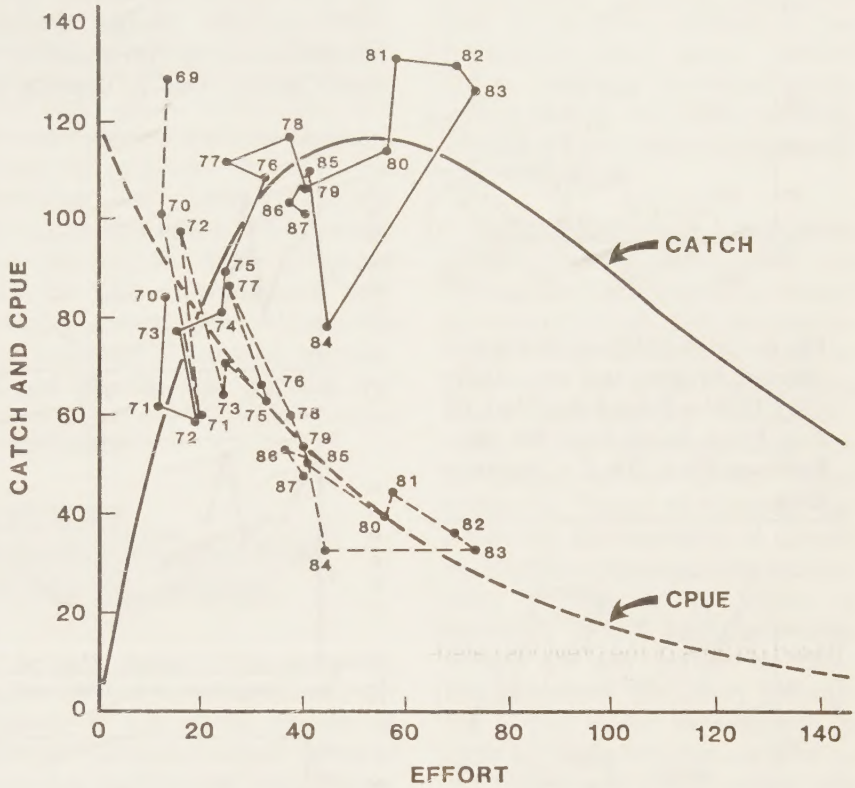


**Fig. 3.** Catch (1000 mt) vs. effort (1000 fishing days) and catch- per-unit-effort (mt per 10 fishing days) vs. effort for yellowfin in the eastern Atlantic, 1969-1987.

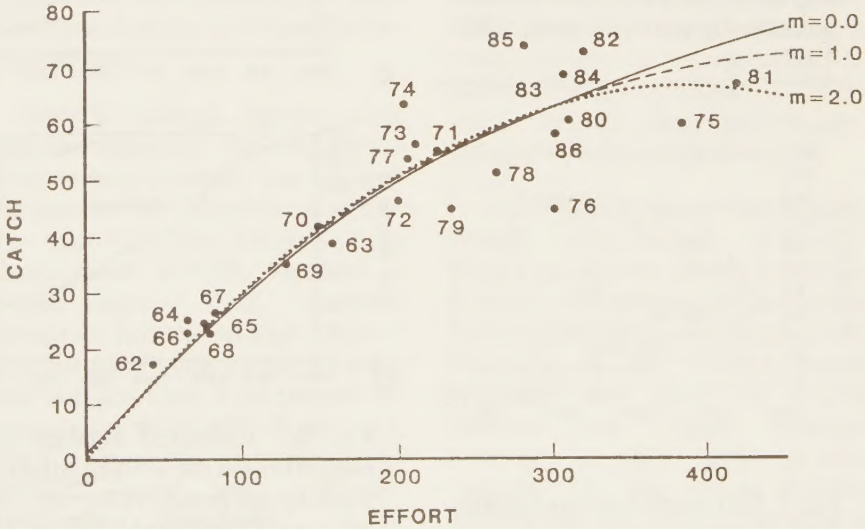


**Fig. 4.** Catch (1000 mt) vs. effort (1000 fishing days) for Atlantic bigeye, 1962-1986.

the last two years, most likely due to the reduction in effort.

**Albacore - The albacore catch declined in 1987 both in the North and South Atlantic** (Fig. 6). However, the surface catch of young albacore in the North Atlantic has increased. In recent years two experimental fisheries targeted albacore: in 1986 and 1987, an experimental gillnet fishery and in 1987 an experimental pair-pelagic-trawl fishery. Both fisheries operated in the eastern North Atlantic and started commercial operations in 1988. Various analytical models have been developed for the north stock. Due to uncertainties concerning effort standardization and discrepancies between sample size frequencies taken aboard longliners and at ports, no assessment was made and no management advice given. For the South Atlantic the present catch level seems to be near the MSY level.

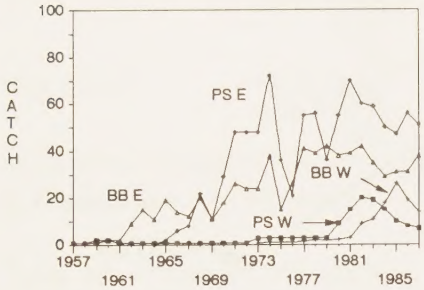


**Fig. 5.** Catch (1000 mt) of Atlantic skipjack by gear and area, 1957-1987. PS W = Purse Seine West, PS E = Purse Seine East, BB W = Baitboat West, BB E = Baitboat East.

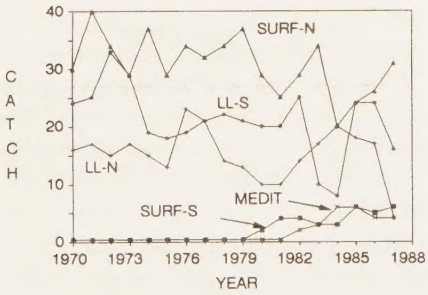


**Fig. 6.** Catch (1000 mt) of Atlantic albacore by gear and area, 1970-1987.

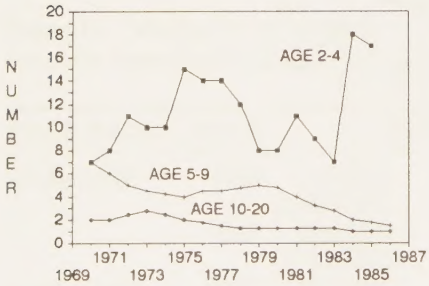


**Fig. 7.** Estimated numbers (million fish) of bluefin tuna in the eastern Atlantic/Mediterranean stock by

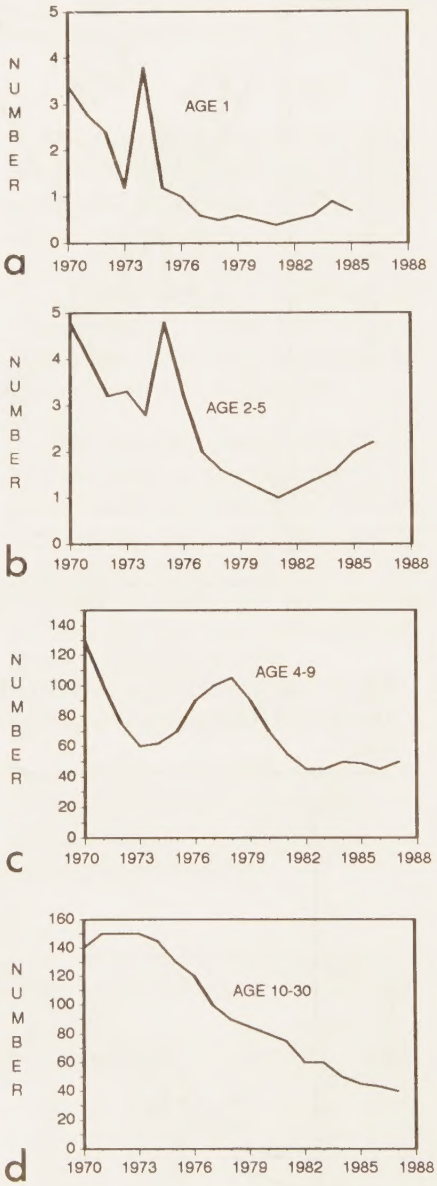


**Fig. 8.** Estimated numbers of bluefin tuna in the western Atlantic stock by age group, 1970-1987: (a) age 1 year (100,000 fish), (b) age 2-5 (100,000 fish), (c) age 4-9 (1000 fish), (d) age 10-30 (1000 fish).

SCRS recommended holding a meeting on longline albacore data in 1989. This will be followed by a later workshop where the data base will be evaluated, effort will be standardized among the fisheries for production model analysis and biological parameters will be reviewed. A status of stocks analysis (the North Atlantic has first priority) will be performed. SCRS recommended that the potential impact of the expansion of the newly developed fisheries in the northeastern Atlantic on stocks should also be studied.

**Bluefin tuna - Substantial progress was made on the analysis of the eastern bluefin stock,** even though there were reservations concerning results. SCRS noted a lack of confidence in some of the Mediterranean data and catch of age 0 and possibly age 1 fish. The results of virtual population analysis (VPA) indicated that between 1970 and 1986 the stock size of older and medium-aged fish (ages 10 to 20 and 6 to 9 years) declined by 70 and 80 percent, respectively (Fig. 7). For younger fish, no trend is apparent.

**More detailed and improved indices of CPUE by age group were made available for the west stock.** Similar methods were used again this year in selecting the CPUE series for VPA, estimation of partial recruitment factors and calibration of VPA. Results indicate that the 1987 adult stock size (ages 10-30) is approximately 30 percent of the 1970 level; ages 6-9 approximately 40 percent; and ages 1-5 for 1985 approximately 31 percent of the 1970 level (Fig. 8). Since 1981, some recovery has occurred. Al-

though no large new year classes have appeared, there has been a general improvement in recruitment accompanied by the higher survival of these fish in their early years. Limited improvement has been observed for medium-sized fish (ages 6 to 9); however, fishing mortality has increased on those age groups. The spawning stock (ages 10 to 30) has declined sharply since 1970 and this decline continues due to high fishing mortality. SCRS recommended that the levels of monitoring not be changed at present and future changes should depend on an evaluation of the impact of current regulations.

**Swordfish - Results of the 1988 Swordfish Workshop were reviewed.** The Workshop (1) revised the data base (through 1987), (2) revised the growth equation, (3) reviewed CPUE indices, and (4) conducted VPA analyses. Analyses were not made for the Mediterranean. Concern was expressed by Workshop participants on the reliability of the VPA results. SCRS identified short-term and longer-term research projects to improve the reliability of assessments. Short-term research projects include: an evaluation of the different procedures to produce unbiased estimates of catch at size; a comparison of catch-at-age trends with age-specific CPUEs; and an evaluation of tag-recapture data with respect to seasonal-geographical distribution patterns of fishing effort and catch. SCRS was somewhat concerned about the preliminary estimates of high fishing mortality, despite the uncertainty resulting from the analysis.

**SCRS also reviewed** results of research on southern bluefin tuna, small tuna-like species (e.g. bonito, frigate tunas, etc.), blue marlin, white marlin and sailfish.

**During the SCRS Meeting, various working groups met. The Yellowfin Year Program is reaching its final phase** of analysis of all the information obtained during the Program. The final meeting of the Program to make overall analyses will be held in Madrid, tentatively in late May 1989.

**Progress made by the Program of Enhanced Research for Billfish was reported**. Although there was some initial delay in starting the program, many activities are being carried out, including port sampling at Caribbean ports, Venezuela, and Senegal. Several observer trips were made on longliners fishing in the Caribbean Sea. Some tagging has started in West Africa. The Committee reviewed the newly proposed plan for 1989 which includes continuation and expansion of sampling and collection of statistics, compilation of historic data, tagging and development of a field kit for species identification.

## RECENT DEVELOPMENTS IN TUNA FISHERIES

*Editor's note: The following news articles were compiled from reports of the NMFS Branch of Foreign Fisheries Analysis, Office of International Fisheries, Washington, D.C. Dennis Weidner, Don Jacobson, P. Niemeier and Francisco Quintanilla contributed to these reports with the assistance of other NMFS officials and U.S. Foreign Service officers.*

**Record Eastern Pacific tuna catches reported** -- Tuna fishermen from several countries operating in the eastern Pacific regulatory area of the Inter-American Tropical Tuna Commission (IATTC) reported a record catch in 1988. Mexico's fishermen had the largest catch of 114,000 metric tons (mt) of yellowfin and skipjack tuna, a 20 percent increase over the 95,600 mt caught in 1987. Over 80 percent of the Mexican catch was yellowfin. Venezuelan fishermen caught 51,400 mt of tuna in the eastern Pacific (80 percent yellowfin), eclipsing their previous record (44,900 mt set in 1987) by 15 percent. Ecuadorean tuna fishermen caught 45,300 mt of tuna in 1988, surpassing their 1987 record of 38,900 mt by 15 percent. The 1988 Ecuadorean tuna catch was unusual in that over two-thirds of it was yellowfin. In most years, yellowfin represents only about 30-40 percent of the Ecuadorean tuna catch. United States fishermen also reported excellent results in 1988, catching 198,900 mt, an increase of 9 percent over 1987 levels.

**South Pacific tuna treaty takes effect** -- The National Oceanic and Atmospheric Administration issued an interim final rule, with the concurrence of the Secretary of State, to implement the South Pacific Tuna Act of 1988 effective February 27, 1989. The rule implements the obligations of the United States under the "Treaty of Fisheries Between the Governments of Certain Pacific Island States and the Government of the United States of America." All U.S. tuna purse-seine vessels are now required to obtain licenses under the Treaty (through the United States Government) in order to fish in the area covered by the Treaty, a 10 million square mile area in the South Pacific Ocean. Albacore vessels using trolling gear fishing outside of the 200 nautical mile fisheries zones of the Pacific Island Parties are excluded from the Treaty's licensing requirements. For further information contact E.C. Fullerton, Director, Southwest Region, NOAA Fisheries, (213) 514-6196.

**U.S. longline fishery for Atlantic bluefin tuna closed** --The U.S. fishery for Atlantic bluefin tuna conducted by longline vessels permitted in the Incidental Catch category and operating in the Atlantic Ocean regulatory area south of 36°00'N latitude was closed effective February 19, 1989. Landings data indicate that the annual Atlantic bluefin tuna quota of 115 short tons (st) for this area would be attained by the effective data. The closure is

intended to prevent the annual quota established for this segment of the fishery from being exceeded and thereby maintain the United States' obligations to the International Commission for the Conservation of Atlantic Tunas under the Atlantic Tunas Convention act. For further information, contact Kathi L. Rodriguez, (508) 281-9324.

**Imports of yellowfin from Spain to U.S. okayed** -- The Government of Spain submitted information which demonstrates that Spain is now in conformance with U.S. marine mammal regulations. As a result, the ban on importation of yellowfin tuna from Spain is rescinded, and yellowfin tuna from Spain now may be imported into the United States effective February 21, 1989. For further information, contact E.C. Fullerton, Regional Director, Southwest Region, NOAA Fisheries, at (213) 514-6196.

**U.S. regulations on intermediary-nation exports of tuna set** -- After March 7, 1989, all nations initiating exports of yellowfin tuna and tuna products to the United States will be required to meet new regulations under a recent amendment to the Marine Mammal Protection Act. The intent of the regulations is to prevent nations embargoed by the United States from circumventing U.S. laws to reduce dolphin mortality in the eastern Pacific Ocean yellowfin tuna purse seine fishery. A revised Yellowfin Certificate of Origin form and instructions are available that include the required information necessary for tuna exports to enter the United States. These forms must accompany all shipments of yellowfin tuna and tuna products listed in the U.S. Harmonized Tariff Schedule.

The new regulations will apply to nations that export yellowfin tuna and tuna products (fresh, frozen or canned) to the United States and also import yellowfin tuna and tuna products caught by vessels of other nations, if the United States bans imports from these other nations. Intermediary nations that fail to ban imports of yellowfin tuna and tuna products from an embargoed nation into their country within 60 days of a U.S. ban and fail to provide official documentation regarding the source of their tuna and tuna products within 90 days of the U.S. ban will not be allowed to export yellowfin tuna to the United States. For further information, contact E.C. Fullerton, Regional Director, Southwest Region, NOAA Fisheries, at (213) 514-6196.

**U.S. quota for canned tuna not in oil reached in January** -- Each year the tariff-rate quota for tuna is based on the U.S. canned tuna production for the preceding calendar year. The 1989 tariff-rate quota, applicable to tuna fish entered, or withdrawn from warehouse, for consumption during calendar year 1989 was 34,806,335 kilograms. This quantity entered at the rate of 6 percent ad valorem. The quota was reached on January 24, the earliest the quota has been reached since the program began. All tuna entering in excess of this quota will be dutiable at the rate of 12.5 percent ad valorem. For further information contact Karen L. Cooper, Chief, Quota Branch, Regulatory Trade Programs Division, Office of Trade Operations, Office of Commercial Operations, U.S. Customs Service, Washington, DC, 20229, (202) 566-8592.

**Mexico assesses Gulf tuna resources** -- Researchers at the Instituto Nacional de Pesca have determined that tuna stocks in Mexican waters of the Gulf of Mexico could support a commercial tuna longline fishery for yellowfin. Stocks of yellowfin are reportedly plentiful off the coast of Veracruz, Tamaulipas, and Campeche, especially during the spring, summer, and fall.

**Mexico intensifies porpoise protection** -- Mexico reports that it is intensifying its efforts to protect porpoises in the eastern Pacific. Mexico initiated its efforts in 1977, when it prohibited purse seining for marine mammals. Further steps were taken June 29, 1987, when new tuna fishing regulations were published. SEPESCA now requires Medina panels with 1.5 inch mesh. Back down procedures are compulsory to free trapped porpoises. Other requirements include speedboats and night lighting. Since 1985 Mexican vessels have carried international scientific and technical observers as a result of an informal agreement with the IATTC. Fines for violating the regulations range from $2,350 for a single offense to confiscation of the catch, gear, and vessel.

**Mexican government sells fishery group** -- Mexico continues its process of divesting itself of fishing operations. The sale of Productos Pesqueros de Mazatlan (PROPEMAZ) to the Grupo Comercial Mexicana and the Grupo Nair was one of the most important transactions. The Grupo Nair was founded in 1981 by six businessmen who own tuna vessels. Productos Pesqueros de la Paz (PROPEPAZ) has also been sold to another tuna company, Empresas Atuneras Tucker. PROPEPAZ's plant at Pichilingue can reportedly process about 21,000 mt of fish annually. The Tucker group includes five companies, each with its own tuna vessels.

**Company seeks to register "Tuna" as exclusive trademark** -- The Colombian company Colombina S.A has filed an application with the Colombian Ministry of Economic Development to market canned tuna under the "Tuna" brand name. U.S. officials maintain that if generic terms, such as "tuna", are successfully registered as exclusive trademarks in any country, products with those names can not be sold in the United States. This is a U.S. Commerce Department program to protect U.S. markets by opposing the registration by foreign governments of trade marks using generic terms.

## STAFF

*Wes Parks, Editor*
*Pat Donley, Statistics*
*Al Jackson, Diane Pickelsimer, Copy Editors*
*Ken Raymond, Art Director*

## CONTRIBUTORS

*Sam Herrick*
*Peter Miyake*

## ORGANIZATION

### Southwest Regional Office

*E. Charles Fullerton, Director*

### Southwest Fisheries Center

*Izadore Barrett, Science and Research Director, Southwest Region*
*Gary Sakagawa, Tuna Program Coordinator*

**U.S. DEPARTMENT OF COMMERCE**
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE
SOUTHWEST FISHERIES CENTER
8604 LA JOLLA SHORES DR. -P.O. BOX 271
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